**abstract.txt**        **Fri Nov 03 13:20:45 2000**        **1**

Results of phase retrieval using a sparse, segmented telescope simulator are
presented.  The wavefront is estimated using our modified Gerschberg-Saxton
routine.  An optimal control is calculated and the wavefront is then
corrected using the segment actuators and a deformable mirror.  Not only is
relative piston between the segments measured, but the interior of the
segments as well.  This differentiates this algorithm from those used on
Keck and other testbeds.